

What is claimed is:

1           1.     A recording medium comprising:  
2           a video region which stores moving picture data, first audio data which is not  
3 encrypted and second audio data which is encrypted;  
4           an audio region which stores third audio data and related additional information; and  
5           a predetermined region which stores reproducing management information for  
6 reproducing video data and/or the encrypted second audio data of the video region.

1           2.     The recording medium of claim 1, wherein the second audio data is  
2 encrypted by an encryption method used in a DVD-Video specification.

1           3.     The recording medium of claim 1, wherein the second audio data is  
2 encrypted by an encryption method used in a DVD-Audio specification.

1           4.     The recording medium of claim 1, wherein the reproducing management  
2 information comprises information related to the encryption of the second audio data and is  
3 stored in the video region.

1           5.     The recording medium of claim 4, wherein the reproducing management  
2 information is stored in a program chain information (PGCI) region of the video region.

1           6.     The recording medium of claim 1, wherein reproducing management  
2 information of video data and/or audio data of the video region is stored in the audio  
3 region.

1           7.     The recording medium of claim 6, wherein the reproducing management  
2 information comprises information related to the encryption of the second audio data.

1           8.     The recording medium of claim 7, wherein the reproducing management  
2 information is stored in an audio title set information management table (ATSI\_MAT) of  
3 the audio region.

9. A recording medium comprising:  
a video region which stores moving picture data and encrypted audio data; and  
a predetermined region which stores reproducing management information for  
reproducing the moving picture data and/or the encrypted audio data.

10. The recording medium of claim 9, wherein the encrypted audio data is  
encrypted using an encryption method complying with a DVD-Video specification.

11. The recording medium of claim 9, wherein the encrypted audio data is  
encrypted using an encryption method complying with a DVD-Audio specification.

12. The recording medium of claim 9, wherein the reproducing management  
information is stored in the video region.

13. The recording medium of claim 12, wherein the reproducing management  
information is stored in a program chain information (PGCI) region of the video region.

14. The recording medium of claim 9, wherein the reproducing management  
information is stored in the audio region.

15. The recording medium of claim 14, wherein the reproducing management  
information is stored in an audio title set information management table (ATSI\_MAT) of  
the audio region.

16. A recording apparatus comprising:  
a first encryptor which encrypts input moving picture data;  
a second encryptor which encrypts input audio data; and  
a recording processor which records the encrypted audio data and moving picture  
data in a predetermined format in a video region of a recording medium, and records

reproducing management information for reproducing the encrypted audio data and/or the moving picture data, in a predetermined region of the recording medium.

17. The recording apparatus of claim 16, further comprising:  
a first encoder which encodes the input moving picture data into a predetermined format and provides the encoded data to the first encryptor; and  
a second encoder which encodes the input audio data into a predetermined format and provides the encoded data to the second encryptor.

18. The recording apparatus of claim 17, further comprising:  
a third encoder which encodes audio data, which is not encrypted, into a predetermined format, and provides the encoded audio data to the recording processor, wherein the recording processor records the audio data, which is not encrypted, in the video region of the recording medium.

19. The recording apparatus of claim 16, wherein the second encryptor encrypts the audio data using an encryption method complying with a DVD-Video specification.

20. The recording apparatus of claim 16, wherein the second encryptor encrypts the audio data using an encryption method complying with a DVD-Audio specification.

21. The recording apparatus of claim 16, wherein the recording processor records the reproducing management information in the video region.

22. The recording apparatus of claim 21, wherein the recording processor records the reproducing management information in a program chain information (PGCI) region of the video region.

23. The recording apparatus of claim 21, wherein the recording processor further records audio data and related additional information and reproducing management

information of video data and/or audio data of the video region in an audio region of the recording medium.

24. The recording apparatus of claim 23, wherein the recording processor further records reproducing management information comprising information related to the encryption of the second audio data.

25. The recording apparatus of claim 23, wherein the recording processor records the reproducing management information in an audio title set information management table (ATSI\_MAT) of the audio region.

26. An apparatus for reproducing a recording medium having separate regions, a video region and an audio region, moving picture data and audio data recorded in the video region, and reproducing management information recorded in a predetermined region and used to reproduce the moving picture data and/or the audio data, the reproducing apparatus comprising:

a reproducing processor which reads the reproducing management information from the recording medium, analyzes whether the audio data and/or the video data recorded on the recording medium are encrypted, determines the encryption method based on the read reproducing management information, and reads the moving picture and/or the audio data from the recording medium;

a first decryptor which decrypts the moving picture data read from the recording medium, according to information on whether the data is encrypted and the encryption method determined by the reproducing processor; and

a second decryptor which decrypts the audio data read from the recording medium, according to information on whether the data is encrypted and the encryption method determined by the reproducing processor.

27. The reproducing apparatus of claim 26, wherein the second decryptor decrypts the audio data using an encryption method complying with a DVD-Video specification and/or a DVD-Audio specification.

28. The reproducing apparatus of claim 26, wherein the reproducing processor reads the reproducing management information from one of the video region and the audio region of the recording medium.

29. The reproducing apparatus of claim 28, wherein the reproducing processor reads the reproducing management information from one of a program chain information (PGCI) region of the video region and an audio title set information management table (ATSI\_MAT) of the audio region.

30. The reproducing apparatus of claim 26, further comprising:  
a first decoder which decodes the video data decrypted by the first decryptor; and  
a second decoder which decodes the audio data decrypted by the second decryptor, wherein the reproducing processor provides the read audio data to the second decoder without decryption if the read audio data is not encrypted.

31. An apparatus for reproducing a recording medium having separate regions, a video region and an audio region, moving picture data and encrypted audio data recorded in the video region, and reproducing management information recorded in a predetermined region and used to reproduce the moving picture data and/or the audio data, the reproducing apparatus comprising:

a reproducing processor which reads the reproducing management information from the recording medium, analyzes whether audio data recorded on the recording medium is encrypted, determines the encryption method based on the read reproducing management information, and reads the audio data from the recording medium; and

a decryptor which decrypts the audio data read from the recording medium, according to information on whether the audio data is encrypted and the encryption method determined by the reproducing processor.

1           32. The reproducing apparatus of claim 31, wherein the decryptor decrypts the  
2 audio data using an encryption method complying with a DVD-Video specification and/or a  
3 DVD-Audio specification.

1           33. The reproducing apparatus of claim 31, wherein the reproducing processor  
2 reads the reproducing management information from one of the video region and the audio  
3 region of the recording medium.

1           34. The reproducing apparatus of claim 33, wherein the reproducing processor  
2 reads the reproducing management information from one of a program chain information  
3 (PGCI) region of the video region and an audio title set information management table  
4 (ATSI\_MAT) of the audio region.

1           35. The reproducing apparatus of claim 31, further comprising:  
2 a decoder which decodes the audio data decrypted by the decryptor,  
3 wherein the reproducing processor provides the read audio data to the decoder  
4 without decryption if the read audio data is not encrypted.

1           36. A method of recording data on a recording medium having a video region  
2 for recording moving picture data and an audio region for recording audio data and related  
3 additional information, the recording method comprising:  
4 encrypting input video data and/or input audio data, and recording the encrypted  
5 video data and/or encrypted audio data in the video region; and  
6 recording reproducing management information for reproducing the encrypted video  
7 data and/or encrypted audio data, in a predetermined region.

1           37. The recording method of claim 36, wherein the encrypting further comprises  
2 encrypting the audio data using an encryption method complying with a DVD-Video  
3 specification.

1 38. The recording method of claim 36, wherein the encrypting further comprises  
2 encrypting the audio data using an encryption method complying with a DVD-Audio  
3 specification.

1 39. The recording method of claim 36, wherein the recording further comprises  
2 storing the reproducing management information in the video region.

1 40. The recording method of claim 39, wherein the recording further comprises  
2 storing the reproducing management information in a program chain information  
3 (PGCI) region of the video region.

1 41. The recording method of claim 36, wherein the recording further comprises:  
2 storing reproducing management information of the video data and/or audio data of  
3 the video region in the audio region, and  
4 storing information relating to the encryption of the encrypted audio data with the  
5 reproducing management information.

1 42. The recording method of claim 41, wherein the recording further comprises  
2 storing the reproducing management information in an audio title set information  
3 management table (ATSI\_MAT) of the audio region.

1 43. The recording method of claim 36, further comprising recording the input  
2 audio data in the video region without encryption.

1 44. A method of reproducing a recording medium having separate video and  
2 audio regions, the video region having moving picture data and encrypted audio data  
3 recorded therein and a predetermined region having reproducing management information  
4 recorded therein, the reproducing management information used to reproduce the moving  
5 picture data and/or the audio data, the reproducing method comprising:  
6 reading the reproducing management information from the recording medium;

analyzing whether the audio data recorded on the recording medium is encrypted  
and determining the encryption method, based on the reproducing management information  
read from the recording medium;

reading the audio data from the recording medium;

decrypting the audio data read from the recording medium, according to the  
determined encryption method if the audio data is encrypted; and

decoding the decrypted audio data.

45. The reproducing method of claim 44, wherein the decrypting of the audio  
data is performed using an encryption method complying with a DVD-Video specification  
and/or a DVD-Audio specification.

46. The reproducing method of claim 44, wherein the reproducing management  
information is read from in the video region or the audio region.

47. The reproducing method of claim 46, wherein the reproducing management  
information is read from one of a program chain information (PGCI) region of the video  
region and an audio title set information management table (ATSI\_MAT) of the audio  
region.

48. The reproducing method of claim 44, further comprising:  
analyzing whether the moving picture data is encrypted and determining the  
encryption method, based on the reproducing management information read from the  
recording medium;  
reading the moving picture data from the recording medium;  
decrypting the moving picture data read from the recording medium, according to  
information on whether the moving picture data is encrypted and the encryption method,  
and decoding the decrypted moving picture data if the moving picture data is encrypted.



1           49. The reproducing method of claim 44, further comprising decoding the audio  
2 data read from the recording medium without decryption if the data is not encrypted.

1           50. A data structure for a recording medium, the data structure comprising:  
2 a first region comprising:  
3           moving picture information,  
4           first audio information corresponding to a sound sequence and associated  
5 with the moving picture information, and  
6           second audio information corresponding to the sound sequence, encrypted  
7 according to a first specification and associated with the moving picture  
8 information;  
9           a second region comprising third audio information corresponding to the sound  
10 sequence and encrypted according to a second specification; and  
11           reproducing management information which enables reproduction of any of the third  
12 audio information, a combination of the third audio information and the moving picture  
13 information, a combination of the moving picture information and the first audio  
14 information and a combination of the moving picture information and the second audio  
15 information.

1           51. The data structure of claim 50, wherein the first audio information is encoded  
2 with using at least one of a lower sampling frequency, a lesser number of quantization bits,  
3 and a lower bit rate than the encoding of the second audio information.